

RECEIVED

MAR 09 2001

## INTERNATIONAL SEARCH REPORT

International application No. PCT/US00/20510  
TECH CENTER 1600/2800

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 38/12, 38/16

US CL : 514/11

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 514/2, 9, 11, 12, 13, 14, 15, 16; 530/317, 321, 324, 325, 326, 327, 328, 329

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST, DIALOG, STN, GENESEQ, SWISSPROT, PIR

search terms: osteoclast, osteoclastogenesis, bone, osteoporosis, tnfr, receptor, binding loop, cyclic peptide, SEQ ID NOS:12-27

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,470,952 A (STAHL ET AL) 28 November 1995 (28/11/95), column 3, lines 10-14, column 9, lines 28-44, claims 1-2.	1, 17, 31-33
X	US 5,849,865 A (CHENG ET AL) 15 December 1998 (15/12/98), abstract, column 1, lines 29-47, claim 6, SEQ ID NOS:26-27.	1-4, 9, 17-19, 23, 31-36, 41
X,P	US 5,955,425 A (MORLEY ET AL) 21 September 1999 (21/09/99), abstract, Figures 2-3, column 4, lines 25-29.	1-4, 17, 18, 31-36
X,P	US 5,985,832 A (ROODMAN ET AL) 16 November 1999 (16/11/99), abstract, claims 1-7.	1, 17, 31-33

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

25 OCTOBER 2000

Date of mailing of the international search report

05 DEC 2000

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

JEFFREY E. RUSSEL

Telephone No. (703) 308-0196

## INTERNATIONAL SEARCH REPORT

MAR 08 2001

International application No.

PCT/US00/20510

MAIL DATE: 03/08/2001

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim
A	KITAZAWA et al. Interleukin-1 Receptor Antagonist and Tumor Necrosis Factor Binding Protein Decrease Osteoclast Formation and Bone Resorption in Ovariectomized Mice. Journal of Clinical Investigation. December 1994, Volume 94, pages 2397-2406.	1-48
A	YAMAGUCHI et al. Characterization of Structural Domains of Human Osteoclastogenesis Inhibitory Factor. The Journal Of Biological Chemistry. 27 February 1998, Volume 273, Number 9, pages 5117-5123.	1-48
X	US 5,869,452 A (NG ET AL) 09 February 1999 (09/02/99), SEQ ID NO:1, claim 1.	1-4, 9, 33-36, 41